

Agilent Ref: 10010792-1
United States Application Serial No. 10/023,375

RESPONSE

In view of the following remarks, the Examiner is respectfully requested to withdraw the rejections and allow Claims 1-17 and 29-41, the only claims pending and currently under examination in this application.

Formal Matters

Claims 1-17 and 29-35 were examined and rejected.

Claims 36-41 have been newly added. Claims 36-38 find support at p. 9, lines 5-6 of the specification and support for Claims 39-41 may be found in Figures 1 and 2.

Claims 18-28 were previously canceled.

As the above amendments introduce no new matter, their entry by the Examiner is respectfully requested.

Double Patenting

Claims 1-17 and 29-35 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-6, 10, 18, 20, 26, 29-31, and 34 of U.S. Patent No. 6,935,727 in view of Beerling et al. (U.S. Patent No. 6,508,536). In view of the enclosed terminal disclaimer, this rejection may be withdrawn.

Rejection under 35 U.S.C. §103

Claims 1-4, 6-13, 15-17, 29-33, and 35 have been rejected under 35 U.S.C. § 103 (a) as allegedly being rendered obvious by Beerling et al. (U.S. Patent No. 6,508,536) in view of McDevitt et al. (U.S. Patent No. 6,713,298).

With respect to rejections made under 35 U.S.C. § 103, MPEP § 2142 states:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.

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In re Vaack, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) [emphasis added].

The present invention features multiple printhead dies bonded to an orifice plate having a plurality of orifices. Accordingly, an element of the Applicants' claimed invention is the presence of an orifice plate having more than one printhead die bonded to it.

In the Office Action, the Examiner alleges that Beerling et al. discloses a multiple die printhead having a plurality of printhead dies present on a surface of an orifice plate and that the orifice plate comprises a plurality of orifices. The Examiner refers to Beerling's disclosure at col. 2, lines 46-48 as supportive of multiple printhead dies bonded to an orifice plate. The passage specifically provides:

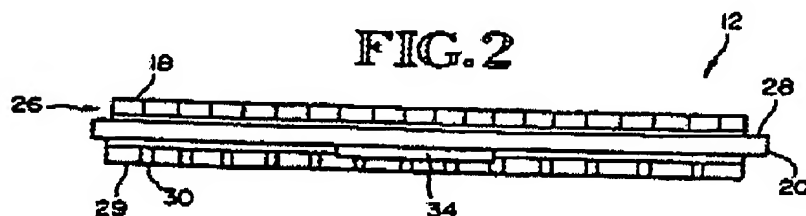
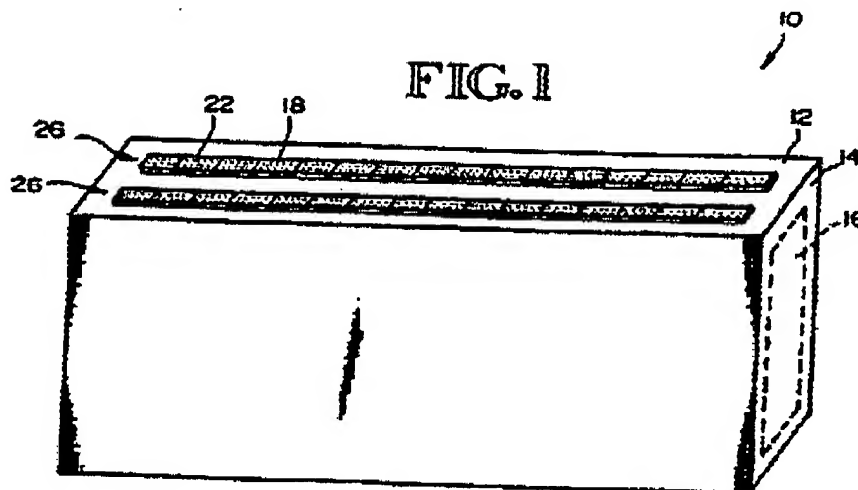
Referring to FIGS. 1 and 2, the printhead 12 includes a plurality of thermal inkjet printhead dies 18 mounted to a **carrier substrate 20** [emphasis added].

As such, the Examiner appears to be equating Beerling's carrier substrate with an orifice plate having a plurality of orifices as in the present claims. However, as set forth below, Beerling's single carrier substrate is not the equivalent of an orifice plate as in the present invention because (1) the carrier substrate does not have multiple orifices and (2) multiple printhead dies are bonded to the carrier substrate but not the orifice plate having a plurality of orifices.

As illustrated in Figures 1 and 2 provided below, each individual printhead die (18) is mounted on the top surface of the carrier substrate (20) in one or more rows. As such, Beerling et al. teaches a carrier substrate having a plurality of printhead dies bonded to its surface. However, it is clear that the carrier substrate (20) does not comprise a plurality of orifices because the orifices are positioned on the other side of each printhead die instead of on the surface of the carrier substrate.

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In addition, Beerling et al. teaches that each printhead die comprises a silicon die, a thin film structure, and an orifice layer. Further, Beerling teaches that each printhead die (18) is mounted on the surface (20) of the carrier substrate in rows. As such, each printhead die (18) consisting of a silicon die, a thin film structure, and an orifice layer is mounted on the surface of the carrier substrate. Therefore, Beerling's printhead consists of individual printhead dies (18) each with its own orifice plate with a plurality of orifices (22) with each printhead die bonded to the same carrier substrate (20).

In sum, Beerling et al. discloses a single carrier substrate having a plurality of printhead dies mounted on its surface. Each printhead die has its own orifice plate and its own plurality of orifices. As such, Beerling et al. fails to teach the element of multiple printhead dies bonded to an orifice plate as presently claimed.

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Furthermore, as the Examiner has cited McDevitt et al. solely for the teaching that biopolymers can be applied onto a substrate using ink-jet printer heads, this reference fails to make up the fundamental deficiency in Beerling et al.

Accordingly, the combined teachings of Beerling et al. and McDevitt et al. fail to teach or suggest each and every element of the claimed invention. Therefore, the Applicants submit that a *prima facie* case of obviousness has not been established for Claims 1-4, 6-13, 15-17, 29-33, and 35. The Applicants respectfully request that this rejection be withdrawn.

Claims 5, 14, and 34 are rejected under 35 U.S.C. § 103 (a) as allegedly being rendered obvious by Beerling et al. (U.S. Patent No. 6,508,536) in view of McDevitt et al. (U.S. Patent No. 6,713,298) and further in view of Gordon et al. (U.S. Patent No. 5,855,835).

In order for a cited reference to render the claims of the present application obvious, each and every limitation found in the claims must be disclosed in the cited reference. As noted above, Beerling et al. and McDevitt et al. fail to teach each and every limitation found in the claims of the present application. In particular, Beerling et al. and McDevitt et al. fail to teach multiple printhead dies bonded to an orifice plate having a plurality of orifices. Further, since Gordon was cited solely for teaching formation of a resistor on a substrate that is made of a semiconductor, the cited reference fails to make up the deficiency of Beerling et al. and McDevitt et al. Therefore, the references alone or in combination do not teach each and every element found in the claims.

As such, since the combination of the cited references fails to teach each every limitation found in the claims of the present application, the cited references fails to render the claims of the present application obvious. Therefore, the Applicants respectfully request that the rejection of Claims 5, 14, and 34 be withdrawn.

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Finally, new claims 36 to 41 are patentable over the cited references for at least the reasons provided above.

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CONCLUSION

In view of the amendments and remarks above, the Applicants respectfully submit that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone Bret E. Field at 650-327-3400.

The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16 and 1.17 which may be required by this paper, or to credit any overpayment, to Deposit Account No. 50-1078, order number 10010792-1.

Respectfully submitted,

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- Terminal Disclaimer over U.S. Patent No. 6,935,727

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